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Attorney Docket No. 13031US01

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Previously Presented) In a communication system comprising a first network including a source arranged to transmit data and a second network including a destination arranged to receive the data, apparatus for communicating between the source and destination comprising:

a first network and a second network, wherein at least one of said first network and said second network is a mesh network;

a first primary node in the first network;

a first secondary node in the first network;

a second primary node in the second network;

a second secondary node in the second network;

a first set of primary routes within the first network arranged to deliver a first set of the data to the first primary node and a second set of the data to the first secondary node, wherein the second set of data comprises a copy of the first set of the data;

a plurality of inter-network routes between the first and second networks arranged to deliver the first and second sets of the data to the second primary node and

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the second secondary node;

a second set of primary routes within the second network arranged to deliver at least one of the first and second sets of data to the destination node;

a selector within the second network arranged to select one of the first and second sets of data;

a first secondary route within the first network between the source and the first secondary node;

a first route selector arranged to select the first secondary route in the event that a primary route within the first set of primary routes is disabled;

a second secondary route within the second network between the second secondary node and the destination; and

a second route selector arranged to select the second secondary route in the event that a primary route within the second set of primary routes is disabled.

2. (Original) Apparatus, as claimed in claim 1, wherein the first network comprises a mesh network and the second network comprises a mesh network.

3. (Original) Apparatus, as claimed in claim 1, wherein the first network comprises a ring network and the second network comprises a mesh network.

4. (Original) Apparatus, as claimed in claim 1, wherein the first set of primary

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routes comprise a first primary route linking the source with the first primary node and a second primary route linking the first primary node with the first secondary node.

5. (Original) Apparatus, as claimed in claim 4, wherein the second set of primary routes comprise a third primary route linking the second primary node with the destination and a fourth primary route linking the second secondary node with the second primary node.

6. (Original) Apparatus, as claimed in claim 1, wherein the selector is located in the second primary node.

7. (Original) Apparatus, as claimed in claim 1, wherein the second set of the data normally is generated by the first primary node.

8. (Original) Apparatus, as claimed in claim 1, wherein the second set of data is absent in the event that any of the primary routes within the first set of primary routes is disabled.

9. (Original) Apparatus, as claimed in claim 1, wherein in the event that the primary route linking the source with the first primary node is disabled, the data is routed from the source to the first primary node through the first secondary route and the first

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secondary node, the second set of the data is generated by the first primary node, and the second set of the data is routed to the first secondary node.

10. (Original) Apparatus, as claimed in claim 1, wherein the first set of primary routes comprise a first primary route linking the source with the first primary node and a second primary route linking the source with the first secondary node.

11. (Original) Apparatus, as claimed in claim 10, wherein the second set of primary routes comprise a third primary route linking the destination with the second primary node and a fourth primary route linking the destination with the second secondary node.

12. (Original) Apparatus, as claimed in claim 11, and further comprising:
a third secondary route within the first network between the source and first primary node; and
a fourth secondary route within the second network between the destination and the second primary node.

13. (Original) Apparatus, as claimed in claim 1, wherein the selector is located in the destination.

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14. (Original) Apparatus, as claimed in claim 1, wherein the second set of the data is generated by the source.

15. (Original) In a communication system comprising a first network including a source arranged to transmit data and a second network including a destination arranged to receive the data, at least one of the first network and the second network being a mesh network, the system also comprising a first primary node in the first network, a first secondary node in the first network, a second primary node in the second network, a second secondary node in the second network, a first set of primary routes within the first network, a second set of primary routes within the second network, a first secondary route within the first network between the source and the first secondary node, and a second secondary route within the second network between the second secondary node and the destination, a method of reducing interruptions in communication between the source and destination comprising:

- generating a first set of the data;
- generating a second set of the data;
- delivering the first set of the data to the first primary node;
- delivering the second set of the data to the first secondary node;
- delivering the first and second sets of the data to the second primary node and the second secondary node;
- delivering at least one of the first and second sets of data to the destination node;

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selecting one of the first and second sets of data;
delivering the first set of data to the first secondary node over the first secondary route in the event that a primary route within the first set of primary routes is disabled;
and
delivering the at least one of the first and second sets of data to the destination over the second secondary route in the event that a primary route within the second set of primary routes is disabled.

16. (Original) A method, as claimed in claim 15, wherein the first network comprises a mesh network and the second network comprises a mesh network.

17. (Original) A method, as claimed in claim 15, wherein the first network comprises a ring network and the second network comprises a mesh network.

18. (Original) A method, as claimed in claim 15, wherein the first set of primary routes comprise a first primary route linking the source with the first primary node and a second primary route linking the first primary node with the first secondary node.

19. (Original) A method, as claimed in claim 18, wherein the second set of primary routes comprise a third primary route linking the second primary node with the destination and a fourth primary route linking the second secondary node with the second

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primary node.

20. (Original) A method, as claimed in claim 15, wherein said selecting one of the first and second sets of data occurs in the second primary node.

21. (Original) A method, as claimed in claim 15, wherein said generating a second set of data occurs at the first primary node.

22. (Original) A method, as claimed in claim 15, wherein the second set of data is absent in the event that any of the primary routes within the first set of primary routes is disabled.

23. (Original) A method, as claimed in claim 15, wherein in the event that a primary route linking the source with the first primary node is disabled, said delivering the first set of data to the first primary node comprises routing the first set of data from the source to the first primary node through the first secondary route and the first secondary node, wherein said generating a second set of data occurs at the first primary node, and wherein said delivering the second set of data to the first secondary node comprises routing the second set of data from the first primary node to the first secondary node.

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24. (Original) A method, as claimed in claim 15, wherein the first set of primary routes comprise a first primary route linking the source with the first primary node and a second primary route linking the source with the first secondary node.

25. (Original) A method, as claimed in claim 24, wherein the second set of primary routes comprise a third primary route linking the destination with the second primary node and a fourth primary route linking the destination with the second secondary node.

26. (Original) A method, as claimed in claim 25, and further comprising:
a third secondary route within the first network between the source and first primary node; and
a fourth secondary route within the second network between the destination and the second primary node.

27. (Original) A method, as claimed in claim 15, wherein said selecting one of the first and second sets of data occurs in the destination.

28. (Original) A method, as claimed in claim 15, wherein said generating a first set of data and generating a second set of data occurs at the source.

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29. (Currently Amended) An apparatus for use in a communication system,
said apparatus comprising:

a source network containing a source node;

a destination network containing a destination node,

wherein at least one of said source network and said destination network is a mesh
network,

wherein said destination network is a network other than said source network;

a first route from said source network to said destination network, wherein said
first route employs a first connection between said source network and said destination
network;

a second route from said source network to said destination network, wherein said
second route employs a second connection between said source network and said
destination network, wherein said second route is not identical to said first route;

a first data set originating from said source node and passing through said first
connection; and

a second data set comprising a copy of said first data set and passing through said
second connection.

30. (Currently Amended) The apparatus of claim 29, further including :

a source network primary node and a source network secondary node within said
source network;

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a set of source routes including a source primary route capable of sending said first data set from said source node to said source network primary node, a source secondary route capable of sending said data set from said source node to said source network secondary node, and a source redundancy route capable of sending said first data set and said second data set between said source network primary node and said source network secondary node[[]];

a destination network primary node and a destination network secondary node within said destination network; and

a set of destination routes including a destination primary route capable of sending said first data set from said destination network primary node to said destination node, a destination secondary route capable of sending said second data set from said destination network secondary node to said destination node, and a destination redundancy route capable of sending said first data set and said second data set between said destination network primary node and said destination network secondary node.

31. (Previously Presented) The apparatus of claim 30, wherein said first route employs said first connection between said source network primary node and said destination network primary node and said second route employs said second connection between said source network secondary node and said destination network secondary node.

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32. (Cancelled)

33. (Previously Presented) The apparatus of claim 29, wherein said second set of data is created by said source node.

34. (Previously Presented) The apparatus of claim 30, wherein said second set of data is created by said source network primary node.

35. (Previously Presented) The apparatus of claim 30, wherein said second set of data is created by said source network secondary node.

36. (Previously Presented) The apparatus of claim 30, wherein said second set of data is created by said destination network primary node.

37. (Previously Presented) The apparatus of claim 30, wherein said second set of data is created by said destination network primary node.

38. (Previously Presented) The apparatus of claim 30, wherein said set of source routes further includes:

a source primary redundant route capable of sending said first data set from said source node to said source network primary node and a source secondary redundant route

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capable of sending said second data set from said source node to said source network secondary node.

39. (Previously Presented) The apparatus of claim 30, wherein said set of destination routes further includes:

a destination primary redundant route capable of sending said first data set from said destination network primary node to said destination node and a destination secondary redundant route capable of sending said second data set from said destination network secondary node to said destination node.

40. (Currently Amended) A method for inter-working communication networks, said method comprising:

~~creating~~ establishing communication with a source network containing a source node;

~~creating~~ establishing communication with a destination network containing a destination node,

wherein at least one of said source network and said destination network is a mesh network,

wherein said destination network is a network other than said source network;

defining a first route between said source network and said destination network, wherein said first route employs a first connection between said source network and said

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destination network;

defining a second route between said source network and said destination network, wherein said second route employs a second connection between said source network and said destination network, wherein said second route is not identical to said first route;

~~generating a first data set and transmitting said~~ receiving a first data set from said source node through said first connection; and

creating a second data set comprising a copy of said first data set and transmitting said second set of data through said second connection.

41. (Currently Amended) : The method of claim 40, further including:

establishing a source network primary node and a source network secondary node within said source network;

defining a set of source routes including a source primary route capable of sending said first data set from said source node to said source network primary node, a source secondary route capable of sending said data set from said source node to said source network secondary node, and a source redundancy route capable of sending said first data set and said second data set between said source network primary node and said source network secondary node;

establishing a destination network primary node and a destination network secondary node within said destination network; and

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defining a set of destination routes including a destination primary route capable of sending said first data set from said destination network primary node to said destination node, a destination secondary route capable of sending said second data set from said destination network secondary node to said destination node, and a destination redundancy route capable of sending said first data set and said second data set between said destination network primary node and said destination network secondary node.

42. (Previously Presented) The method of claim 41, further including:

linking said source network primary node to said destination network primary node; and

linking said source network secondary node to said destination network secondary node.

43. (Previously Presented) The method of claim 41, further including:

linking said source network primary node to said destination network secondary node; and

linking said source network secondary node to said destination network primary node.

44. (Previously Presented) The method of claim 40, further including:

selecting one of said first set of data and said second set of data to forward

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to said destination node.

45. (Previously Presented) The method of claim 41, further including:
creating a copy of said first set of data after a network failure and sending
said copy of said first set of data through said second route.

46. (Previously Presented) The method of claim 41, further including:
creating a copy of said second set of data after a network failure and
sending said copy of said second set of data said first route.

47. (Previously Presented) The method of claim 40, wherein said creating of
said second data set occurs before said transmitting of said first data set.

48. (Previously Presented) The method of claim 40, further including:
creating an additional copy of said first data set after the loss of said
second data set and transmitting said additional copy of said first data set along a path
distinct from the path of said first data set.

49. (Previously Presented) The method of claim 40, further including:
creating an additional copy of said second data set after the loss of said
first data set and transmitting said additional copy of said second data set along a path

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distinct from the path of said second data set.

50. (Currently Amended) A communication system comprising:
a source network containing a source node;
a destination network containing a destination node,
wherein at least one of said source network and said destination network is a mesh network,

wherein said destination network is a network other than said source network;
a first connection between said source network and said destination network;
a second connection between said source network and said destination network,
wherein said second connection is not identical to said first connection;
a first data set originating from said source node and passing through said first connection; and
a second data set comprising a copy of said first data set, said second data set passing through said second connection.

51. (New) The apparatus of claim 30, wherein said first route employs said first connection between said source network primary node and said destination network secondary node and said second route employs said second connection between said source network secondary node and said destination network primary node.

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52. (New) The apparatus of claim 29, further including:
a selector within said destination network capable of choosing one of said
first set of data and said second set of data to forward to said destination node.